

SEQUENCE LISTING

(1) GENERAL INFORMATION:

- (i) APPLICANT: Saiko HOSOKAWA
Toshiaki TAGAWA
Yoko HIFAKAWA
Norihiko ITC
Kazuhiro NAGAIKE
- (ii) TITLE OF INVENTION: Human Monoclonal Antibody
Specifically Binding to Surface Antigen of Cancer
Cell Membrane
- (iii) NUMBER OF SEQUENCES: 41
- (iv) CORRESPONDENCE ADDRESS:
(A) ADDRESSEE: Wenderoth, Lind & Ponack
(B) STREET: 2033 K Street, N.W., #800
(C) CITY: Washington
(D) STATE: D.C.
(E) COUNTRY: U.S.A.
(F) ZIP: 20006
- (v) COMPUTER READABLE FORM:
(A) MEDIUM TYPE: Diskette, 3.5 inch, 1.44 mb
(B) COMPUTER: IBM Compatible
(C) OPERATING SYSTEM: MS-DOS
(D) SOFTWARE: WordPerfect 5.1
- (vi) CURRENT APPLICATION DATA:
(A) APPLICATION NUMBER: 09/467,903
(B) FILING DATE: December 21, 1999
(C) CLASSIFICATION:
- (vii) PRIOR APPLICATION DATA:
(A) APPLICATION NUMBER: 08/450,363
(B) FILING DATE: May 25, 1995
- (viii) PRIOR APPLICATION DATA:
(A) APPLICATION NUMBER: 08/360,125
(B) FILING DATE: December 20, 1994
- (ix) PRIOR APPLICATION DATA:
(A) APPLICATION NUMBER: 07/305,534
(B) FILING DATE: June 29, 1992
- (x) PRIOR APPLICATION DATA:
(A) APPLICATION NUMBER: JP158859/1991
(B) FILING DATE: June 28, 1991
- (xi) PRIOR APPLICATION DATA:
(A) APPLICATION NUMBER: JP158860/1991
(B) FILING DATE: June 28, 1991
- (xii) PRIOR APPLICATION DATA:

- (A) APPLICATION NUMBER: JP158861/1991
- (B) FILING DATE: June 28, 1991

(viii) ATTORNEY/AGENT INFORMATION:

- (A) NAME: Warren M. Cheek Jr.
- (B) REGISTRATION NUMBER: 33,367
- (C) REFERENCE/DOCKET NUMBER:

(ix) TELECOMMUNICATION INFORMATION:

- (A) TELEPHONE: 202-721-8200
- (B) TELEFAX: 202-721-8250
- (C) TELEX:

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(vi) ORIGINAL SOURCE: human IgG antibody

- (A) ORGANISM:

- (B) STRAIN:

- (C) INDIVIDUAL ISOLATE:

- (D) DEVELOPMENTAL STAGE:

- (E) HAPLOTYPE:

- (F) TISSUE TYPE:

- (G) CELL TYPE:

- (H) CELL LINE:

- (I) ORGANELLE:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:

- (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:

- (B) MAP POSITION:

- (C) UNITS:

(ix) FEATURE:

- (A) NAME/KEY:

- (B) LOCATION:

- (C) IDENTIFICATION METHOD:

- (D) OTHER INFORMATION:

(x) PUBLICATION INFORMATION:

- (A) AUTHORS:

- (B) TITLE:

- (C) JOURNAL:

- (D) VOLUME:

- (E) ISSUE:

- (F) PAGES:

- (G) DATE:

- (H) DOCUMENT NUMBER:

- (I) FILING DATE:

- (J) PUBLICATION DATE:

- (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

G GCC CTT GGT GGA GGC TGA AGA GAC GGT GAC CAT TCT

37

(2) INFORMATION FOR SEQ ID NO:2:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 21 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE: human IgG antibody
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE:
 - (H) CELL LINE:
 - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

TGG TGC AGC CAC AST TCG TTT

21

(2) INFORMATION FOR SEQ ID NO:3:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 357 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:

- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

CAG	GTG	CAG	CTG	CAG	TGC	GAC	CCA	GGA	CTG	GTG	AAG	CCT	TCA	45	
CAG	ACC	CTG	TCC	CTG	AAC	TGC	ACT	GTC	TCT	GGT	GGC	TCC	ATC	AGC	90
AGT	TGT	GGT	TTC	TAC	TGC	AAC	TGC	ATC	CGC	CAG	CCA	GGG	AAG		135
GGC	CTG	GAG	TGG	ATT	GGG	TAC	ATC	TAT	TAC	AGT	GGG	AGC	ACC	TAC	180
TAC	AAC	CCG	TCC	AAG	AGT	GGA	GTT	ACC	ATA	TCG	CTA	GAC	ACG		225
TCT	AAG	AGC	CAG	TTC	TCC	AVG	CTG	AGC	TCT	CTG	ACT	GCC	GCG		270
GAC	ACG	GCC	GTG	TAT	TAT	TGT	GCG	AGG	TCT	ACC	CGA	CTA	GGG	GGG	315
GCT	GAC	TAC	TGG	GGT	CAG	GGA	ATA	ATG	GTC	ACC	GTC	TCT	TCA		357

(2) INFORMATION FOR SEQ ID NO:4:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 342 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:

- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

GAC ATC GTG ATG ACC CAG TCT CGA GAC TCC CTG GCT GTG TCT CTG	45
GGC GAG AGG GCC ACC ATG AAC TGT AAG TCC AGC CAG AST GTT TTA	90
TAC AAC TCC AAC AAT AAG AAA TAC TTA GCT TGG TAC CAG CAG AAA	135
CCA GGA CAG CCT CCT AAG CTG CTC ATT TAC TGG GCA TCT ACC CGG	180
GAA TCC GGG GTC CCT GAG CGA TTC AGT GGC AGC GGG TCT GGG ACA	225
GAT TTC ACT CTC ACC APC AGC AGC CTG CAG GCT GAA GAT GTG GCA	270
GTT TAT TAC TGT CAG CGG TAT TAT AGT ACT CGG TGG AGC TTC GGC	315
CAA GGG ACC AAG GTG GAA ATC AAA CGA	342

- (2) INFORMATION FOR SEQ ID NC:5:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 119 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:

- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHOR(S):
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Gln	Val	Gln	Leu	Gln	Glu	Ser	Gly	Pro	Gly	Leu	Val	Lys	Pro	Ser
1									10				15	
Gln	Thr	Leu	Ser	Leu	Thr	Cys	Thr	Val	Ser	Gly	Gly	Ser	Ile	Ser
									25				30	
Ser	Cys	Gly	Phe	Tyr	Tyr	Asn	Trp	Ile	Arg	Gln	His	Pro	Gly	Lys
									40				45	
Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile	Tyr	Tyr	Ser	Gly	Ser	Thr	Tyr
									55				60	
Tyr	Asn	Pro	Ser	Leu	Lys	Ser	Arg	Val	Thr	Ile	Ser	Leu	Asp	Thr
									65				75	
Ser	Lys	Ser	Gln	Phe	Ser	Leu	Lys	Leu	Ser	Ser	Leu	Thr	Ala	Ala
									85				90	
Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Thr	Arg	Leu	Arg	Gly
									95				105	
Ala	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Met	Val	Thr	Val	Ser	Ser	
									111				115	

(2) INFORMATION FOR SEQ ID NO:6:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 114 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (I) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:

- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

Asp	Ile	Val	Met	Thr	Gln	Ser	Pro	Asp	Ser	Leu	Ala	Val	Ser	Leu
1														15
Gly	Glu	Arg	Ala	Tyr	Ile	Asn	Cys	Lys	Ser	Ser	Gln	Ser	Val	Leu
														30
Tyr	Asn	Ser	Asn	Asn										
														45
Pro	Gly	Gln	Pro	Frc	Lys	Leu	Ile	Tyr	Trp	Ala	Ser	Thr	Arg	
														60
Glu	Ser	Gly	Val	Frc	Asp	Arg	Phe	Ser	Gly	Ser	Gly	Thr		
														75
Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Ala	Glu	Asp	Val	Ala
														90
Val	Tyr	Tyr	Cys	Gln	Gln	Tyr	Tyr	Ser	Thr	Pro	Trp	Thr	Phe	Gly
														105
Gln	Gly	Thr	Lys	Val	Gln	Ile	Lys	Arg						
														110

(2) INFORMATION FOR SEQ ID NO:7:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 17 base pairs

- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE: human IgM antibody
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE:
 - (H) CELL LINE:
 - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:
C GAG GGG GAA AAG GGT T 17

- (2) INFORMATION FOR SEQ ID NO:3:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 19 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE: human IgM antibody
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:

- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE:
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHOR(S):
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

G AAG CTC CTC AGA GGA GGG

19

- (2) INFORMATION FOR SEQ ID NO:9:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 366 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) Tissue TYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:

- (B) MAP POSITION:
- (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

CAG	CTG	CAG	CTG	CAG	GAG	TGG	CCA	GGA	CTG	GTG	AAG	CCT	TCG	45	
GAG	ACC	CTG	TCC	CTC	AGT	TGC	ACT	GTC	TCT	GGT	GCG	TCC	ATC	AGC	90
AGT	AGT	AGT	TAC	TAC	TGG	GCG	TGG	ATG	CGC	CAG	CCC	CCA	GGG	AAG	135
GGG	CTG	GAG	TGG	ATT	GCG	AGT	ATG	TAT	TAT	AGT	GGG	AGC	ACC	TAC	180
TAC	AAC	CCG	TCC	CTC	AAG	AGT	ATA	GCA	GTC	ACC	ATA	TCC	GTA	GAC	225
TCC	AAG	AAC	CAG	TTC	TCC	CTG	AAG	CTG	AGC	TCT	GTC	ACC	GCC	GCA	270
GAC	ACG	GCT	GTG	TAT	TAC	TGT	GCG	AGG	GGG	AGC	TAC	GGG	GGC	TAC	315
TAC	TAC	GGT	ATG	GAC	GTC	TGG	GCG	CAA	GGG	ACC	ACG	GTC	ACC	GTC	360
TCC	TCA														366

- (2) INFORMATION FOR SEQ ID NO:10:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 324 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:

- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

TAT	GAG	CTG	ACA	CAG	CCA	GGC	TGG	TCA	GTG	TCC	CCA	GGA	CAG	45	
ACG	GCC	AGG	ATC	ACC	TGC	TCT	GGA	GAT	GCA	TTG	CCA	AAG	CAA	TAT	90
GCT	TAT	TGG	TAC	CAG	CAG	AAG	GCA	GGC	CAG	GCC	CCT	GTG	CTG	GTG	135
ATA	TAT	AAA	GAC	AGT	GAG	AGG	CCC	TCA	GGG	ATC	CCT	GAG	GGA	TTC	180
TCT	GGC	TCC	AGC	TCA	GGG	ACA	ACA	GTC	ACG	TTG	ACC	ATC	AGT	GGA	225
GTC	CAG	GCA	GAA	GAC	SAG	GCT	SAC	TAT	TAC	TGT	CAA	TCA	GCA	GAC	270
AGC	AGT	GGT	ACT	TAT	SAG	GTA	TTC	GGC	GGA	GGG	ACC	AAG	CTG	ACC	315
GTC	CTA	GGT													324

- (2) INFORMATION FOR SEQ ID NO:11:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 123 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
 - (ix) FEATURE:
 - (A) NAME, KEY:
 - (B) LOCATION:

- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Gln	Leu	Gln	Leu	Gln	Glu	Ser	Gly	Pro	Gly	Leu	Val	Lys	Pro	Ser
1								10					15	
Glu	Thr	Leu	Ser	Ile	Thr	Cys	Thr	Val	Ser	Gly	Gly	Ser	Ile	Ser
								25					30	
Ser	Ser	Ser	Tyr	Tyr	Tyr	Gly	Trp	Ile	Arg	Gln	Pro	Pro	Gly	Lys
								40				45		
Gly	Leu	Glu	Trp	Ile	Gly	Ser	Ile	Tyr	Tyr	Ser	Gly	Ser	Thr	Tyr
								55				60		
Tyr	Asn	Pro	Ser	Leu	Lys	Ser	Arg	Val	Thr	Ile	Ser	Val	Asp	Thr
								70				75		
Ser	Lys	Asn	Gln	Phe	Ser	Leu	Lys	Leu	Ser	Ser	Val	Thr	Ala	Ala
								85				90		
Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Gly	Ser	Tyr	Gly	Gly	Tyr
								100				105		
Tyr	Tyr	Gly	Met	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	Val	Thr	Val
								115				120		
Ser	Ser													

- (2) INFORMATION FOR SEQ ID NO:12:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 108 amino acids
 - (B) TYPE: amino acid
 - (C) STRAINDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:

(ix) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:

(x) PUBLICATION INFORMATION:

- (A) AUTHORS:
- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

Tyr	Glu	Leu	Thr	Gln	Prc	Pro	Ser	Val	Ser	Pro	Gly	Gln		
1												15		
Thr	Ala	Arg	Ile	Thr	Cys	Ser	Gly	Asp	Ala	Leu	Pro	Lys	Gln	Tyr
														30
Ala	Tyr	Trp	Tyr	Gln	Gln	Lys	Prc	Gly	Gln	Ala	Pro	Val	Leu	Val
														45
Ile	Tyr	Lys	Asp	Ser	Glu	Arg	Prc	Ser	Gly	Ile	Pro	Glu	Arg	Phe
														60
Ser	Gly	Ser	Ser	Gly	Thr	Thr	Val	Thr	Leu	Thr	Ile	Ser	Gly	
														75
Val	Gln	Ala	Glu	Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Ser	Ala	Asp
														90
Ser	Ser	Gly	Thr	Tyr	Gln	Val	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr
														105
Val	Leu	Gly												

(2) INFORMATION FOR SEQ ID NO:13:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 8 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: hybridoma producing human monoclonal

antibody, an antigen to which exists on the surface of cancer cell membrane

- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION: 4
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION: xaa = "Cys or Ser"
- (ix) FEATURE:
 - (A) NAME KEY:
 - (B) LOCATION: 5
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION: xaa = "Gly or Ser"
- (ix) FEATURE:
 - (A) NAME KEY:
 - (B) LOCATION: 6
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION: xaa = "Phe or Tyr"
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) IMPLANTATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:
Ile Ser Ser Xaa Xaa Xaa Tyr Tyr
1 2

- (2) INFORMATION FOR SEQ ID NO:14:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 12 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:

- (F) TISSUE TYPE:
- (G) CELL TYPE: hybridoma producing human monoclonal antibody, an antigen to which exists on the surface of cancer cell membrane
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION: 3
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION: xaa = "Tyr or Ser"
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

Ile Gly Xaa Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr
1 10

- (2) INFORMATION FOR SEQ ID NO:15:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 4 amino acids
 - (B) TYPE: amino acid
 - (C) STRANGENESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: hybridoma producing human monoclonal antibody, an antigen to which exists on the surface of cancer cell membrane
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION: 2
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION: xaa = "Ala or Met"
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION: 4
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION: xaa = "Tyr or Val"
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

Gly Xaa Asp Xaa
1

- (2) INFORMATION FOR SEQ ID NO:16:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:

- (B) MAP POSITION:
- (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

Ile Ser Ser Cys Gly Phe Tyr Trp Asn
1 5

- (2) INFORMATION FOR SEQ ID NO:17:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 12 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HABITAT:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
 - (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
 - (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:

- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr
1 5 10

(2) INFORMATION FOR SEQ ID NO:18:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) SOURCE:
- (viii) POSITION IN GENOME:
 - (A) CHROM. HOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHOR:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:

(K) RELEVANT RESIDUES:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

Ser Thr Arg Leu Arg Gly Ala Asp Tyr
1 5

(2) INFORMATION FOR SEQ ID NO:19:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 17 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HABITAT:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANISM:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHOR(S):
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Lys Ser Ser Gln Ser Val Leu Tyr Asn Ser Asn Asn Lys Lys Tyr Leu Ala
1 5 10 15

(2) INFORMATION FOR SEQ ID NO:20:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 7 amino acids

- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

Trp Ala Ser Thr Arg Glu Ser
1 2

- (2) INFORMATION FOR SEQ ID NO:21:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:

- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

Gln Gln Tyr Tyr Ser Thr Pro Trp Thr
1 ?

- (2) INFORMATION FOR SEQ ID NO:22:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:

- (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

Ile Ser Ser Ser Ser Tyr Tyr Trp Gly Trp
1 5 10

- (2) INFORMATION FOR SEQ ID NO:23:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 14 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HABITAT:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1 3 1
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
 - (ix) FEATURE:
 - (A) NAME, KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:

- (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
- (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro
1 5 10

- (2) INFORMATION FOR SEQ ID NO:24:
- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 12 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
- (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HERELTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
- (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
- (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
- (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
- (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:

- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

Gly Ser Tyr Gly Gly Tyr Tyr Tyr Gly Met Asp Val
1 5 10

(2) INFORMATION FOR SEQ ID NO:25:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

Asp Ala Leu Pro Lys Gln Tyr Ala Tyr
1 5

(2) INFORMATION FOR SEQ ID NO:26:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 4 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HABITAT:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANISM:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

Lys Asp Ser Glu
1

(2) INFORMATION FOR SEQ ID NO:27:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 11 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:

- (vi) ORIGINAL SOURCE:
- (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
- (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
- (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
- (A) NAME, KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
- (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

Gln Ser Ala Asp Ser Ser Gly Thr Tyr Glu Val
1 5 10

- (2) INFORMATION FOR SEQ ID NO:23:
- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 24 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
- (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human monoclonal antibody, an antigen to which exists on the surface of

- cancer cell membrane
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

ATC AGC AGT WGT RGI TWC TAC TGG 24

- (2) INFORMATION FOR SEQ ID NO:29:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 36 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANGLINES: double
 - (D) POLARITY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human monoclonal antibody, an antigen to which exists on the surface of cancer cell membrane
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:

- (B) MAP POSITION:
- (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

ATT GGG WRY ATC TAT TAY AGT GGG AGC ACC TAC TAC 36

- (2) INFORMATION FOR SEQ ID NO:30:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 12 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) ENVIRONMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human monoclonal antibody, an antigen to which exists on the surface of cancer cell membrane
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) SOURCE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
 - (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
 - (x) PUBLICATION INFORMATION:

- (A) AUTHORS:
- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

GGK RYK GAC KWC 12

(2) INFORMATION FOR SEQ ID NO:31:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 24 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNIT:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
- (J) PUBLICATION DATE:

(K) RELEVANT RESIDUES:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

ATC AGC AGT TGT GGT TTC TAC TGG 24

- (2) INFORMATION FOR SEQ ID NO:32:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 36 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (E) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (B) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (E) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (E) MAP POSITION:
 - (C) UNITS:
 - (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
 - (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

ATT GGG TAC ATC TAT TAC AGT GGG AGC ACC TAC TAC 36

- (2) INFORMATION FOR SEQ ID NO:33:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 27 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/FEW:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

TCT ACC CGA CTA CGG GGG GGT GAC TAC 27

- (2) INFORMATION FOR SEQ ID NO:34:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 51 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:

- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHOR:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

AAG TCC AGC CAG AGT CTT TTA TAC AAC TCC	30
AAC AAT AAG AAA TAC TTA GCT	51

- (2) INFORMATION FOR SEQ ID NO:35:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 31 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HABLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:

- (B) MAP POSITION:
- (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT REFERENCES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

TGG GCA TCT ACC TGG GAA TCC 21

- (2) INFORMATION FOR SEQ ID NO:36:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 27 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
 - (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
 - (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:

- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

CAG CAG TAT TAT AGT ACT CCG TGG ACG 27

(2) INFORMATION FOR SEQ ID NO:37:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 30 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

ATC AGC AGT AGT AGT TAC TAC TGG GGC TGG 30

- (2) INFORMATION FOR SEQ ID NO:3:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 42 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (v) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vi) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (vii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
 - (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
 - (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

ATT GGG AGT ATC TAT TAT AGT GGG AGG ACC TAC TAC AAC CCG 42

- (2) INFORMATION FOR SEQ ID NO:3:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 36 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:

- (vi) ORIGINAL SOURCE:
- (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
- (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
- (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
- (A) NAME KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
- (A) AUTHOR:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

GGG AGC TAC GGG GGC TAT TAC TAC GGT ATG GAC GTC 36

- (2) INFORMATION FOR SEQ ID NO:40:
- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 27 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
- (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:

- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNIT:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

GAT GCA TTG CCA AAG CAA TAT GCT TAT 27

- (2) INFORMATION FOR SEQ ID NO:41:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 12 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORIGIN:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANISM:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNIT:
 - (ix) FEATURE:
 - (A) NAME/KEY:

- (B) LOCATION:
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

AAA GAC AGT GAG 12

- (2) INFORMATION FOR SEQ ID NO:42:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 33 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HABITAT:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME SEGMENT:
 - (B) MAP POSITION:
 - (C) UNIT:
 - (ix) FEATURE:
 - (A) NAME/KEY:
 - (E) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (I) OTHER INFORMATION:
 - (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:

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- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

CAA TCA GCA GAC AGC ACT GGT ACT TAT GAG GTA 33